



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/583,881

06/21/2006

Michio Nishi

CU-4891 RJS

8922

26530 7590 06/08/2009
LADAS & PARRY LLP
224 SOUTH MICHIGAN AVENUE
SUITE 1600
CHICAGO, IL 60604

EXAMINER

CALANDRA, ANTHONY J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

06/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,881	Applicant(s) NISHI ET AL.	
	Examiner ANTHONY J. CALANDRA	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1791

Detailed Office Action

The communication dated 2/17/2009 has been entered and fully considered.

Claims 4 and 10 have been canceled. Claims 1-3, 5-9, and 11 have been amended.

Claims 1-3, 5-9, and 11 are currently pending.

Response to Arguments

112 2nd rejections

In light of amendment the 112 2nd rejection towards claim 6 has been withdrawn.

Art rejections

Applicant argues against the combination of SATORU in view of HAMILTON. Applicant argues that neither SATORU nor HAMILTON teach the specific feature of a washing the separated paper piece with water in a rotary drum type washing device so to eliminate a gypsum component adhering to the paper piece from the paper piece. Applicant argues that HAMILTON only teaches removing fibers containing ink.

The examiner agrees that SATORU does not teach a rotary drum washer. However, SATORU does teach the process of separating gypsum from the paper by way of adding water, agitating, then sieving out the water (screening water from fibers and hence thickening the fibers), and repeating the process three times. By performing this process no gypsum was found to be adhering to the paper [0008-example].

Art Unit: 1791

HAMILTON describes teachings to the general recycling of waster papers. HAMILTON discloses a gravity decker washer [pg. 197- Figure 83]. A gravity decker washer has a stainless cylinder or 'drum' [pg. 197 column 1]. The cylinder or 'drum' rotates [pg. 197 column 1]. Therefore the gravity decker of HAMILTON is unequivocally a rotary drum washer. Fiber is fed to the rotating drum and the water passes through the wire mesh. A mesh is another word for 'sieve'.

SATORU states by diluting the pulp with adhering gypsum and then thickening the pulp through sieving the gypsum can be removed. The gravity decker works in the same way in an industrial scale, dilute pulp is fed into the decker at low consistency, of about 0.8% [pg. 191 Table 79]. The water than passes through the mesh or 'sieve' and therefore the pulp is thickened to a consistency of about 6%. As such the decker of HAMILTON works in the same manner as the example of SATORU and would be expected to remove the gypsum from the fiber. HAMILTON gives further evidence that gypsum could be washed from the fibers when HAMILTON states that 'ash' a mineral residue, can be removed from pulp by way of washing [pg. 189 column 2]. GYPSUM can also be considered a mineral residue.

As SATORU teaches a washing method of dilution and thickening and HAMILTON teaches a dilution thickening method it would have been obvious at the time of the invention to substitute one known washing method for another known washing method. As both methods work by dilution-thickening using a sieve or mesh, the person of ordinary skill in the art would expect the rotary drum of HAMILTON to remove gypsum from the fiber. It is typically prima

Art Unit: 1791

facie obvious to make a simple substitution of one known component for another known component given to obtain predictable results.

Further a person of ordinary skill in the art would be motivated to using the rotating drum device because it is the most common and most convenient washing device as disclosed by HAMILTON [pg. 196 column 2] and it provides the highest production capacity per square foot.

The manner by which ink is removed is not germane to the question of obviousness as it is clear that dilution-thickening of SATORU removes gypsum and HAMILTON teaches a device that performs same technique of dilution-thickening.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1791

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5-9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06-142638 SATORU et al., hereinafter SATORU, in view of Pulp and Paper Manufacture: Secondary Fibers and Non-wood Pulping by Hamilton et al. Editor, hereinafter HAMILTON.

Examiner has included machine translation to English of the SATORU reference which shall be referred to in the below rejection.

As for claims 1, SATORU discloses a method for recovering paper from gypsum board by separating the paper from said board (*A method of recovering a base paper for gypsum board, which is configured to recover a base paper for gypsum board from a waste material of gypsum board comprising a gypsum core and the base paper for gypsum board adhering thereto* [abstract, paragraph 0002]). SATORU discloses a crushing step prior to a heating step (*breaking the waste material of gypsum board* [paragraph 0002 and paragraph 0008]). Subsequent to the heating step the crushed gypsum and paper is separated by way to a sieve (*separating a gypsum*

Art Unit: 1791

component and a paper piece of the base paper for gypsum board from the broken waste material of gypsum board [paragraph 0008]). SATORU discloses adding water to the recovered paper, agitating the paper water mixture and the separating adhered gypsum. SATORU completes this operation three times. SATORU does not appear to disclose using a washing drum to complete the washing operation (*washing the separated paper piece with water using a rotary drum-type washing device so as to eliminate a gypsum component adhering to the paper piece* [paragraph 0008]).

HAMILTON discloses the well known processes related to paper recycling. HAMILTON discloses that the mechanical process of washing can be used to remove ash and dirt particles from pulp [pg. 189]. HAMILTON discloses the use of a rotary drum type washing device for washing repulped used paper [pg. 196-197 and Figures 82-83]. HAMILTON discloses repulping used paper in a re-pulper which is a device that disperses the dry paper in water prior to washing [pg. 159-160 Figure 50 and Figure 60].

At the time of the invention it would have been obvious to wash the used paper of SATORU in the washing device of HAMILTON. A person of ordinary skill in the art would be motivated to using the rotating drum device because it is the most common and most convenient washing device as disclosed by HAMILTON [pg. 196]. Alternatively, SATORU teaches one known type of washing used paper. HAMILTON discloses a second known type of washing used paper of contaminants. A person of ordinary skill in the art would reasonably expect that by substituting the unit of HAMILTON for the unit of SATORU that the paper would be washed. It is *prima facie* obvious to substitute one known component for another known component absent evidence of unexpected results.

Art Unit: 1791

As for claim 2, as stated above SATORU discloses that prior to separating gypsum from the paper and subsequent to crushing the gypsum board, the crushed material is heated in a rotary kiln [paragraph 0004].

As for claims 5, HAMILTON discloses that used paper/pulp is washed with 62,584 L water / metric ton pulp [pg. 199]. This is equivalent to 62:1 water to pulp ratio which falls within the instant claimed range (assuming specific gravity of 1 for pulp and for water).

As for claim 6, HAMILTON discloses that the pulp is repulped in the re-pulper to consistencies of 4-8% to 20% [pg. 161 column 1]. At a consistency of 8% there is 8 grams pulp and 92 grams water, for a ratio of 11.5:1 which falls within the instant claimed range.

As for claim 7, HAMILTON discloses that after washing in the rotary drum washer that a couch roll on the rotary drum washer squeezes additional water (dewater) out of the pulp and increases the exit consistency by 1-2% [pg. 197 column 2].

As for claim 8 and 11, SATORU discloses a crushing device for breaking up the gypsum board (*a device configured to break a waste material of gypsum board* [paragraph 0002 and paragraph 0008]). SATORU further discloses a sieve for separating gypsum from the paper (*a device configured to separate a burnt gypsum component and a paper piece from the broken waste material of gypsum board* [paragraph 0008]). SATORU discloses a device in which water is added to the recovered paper, agitating the paper water mixture and the separating adhered gypsum. SATORU completes this operation three times. SATORU does not appear to disclose using a washing drum to complete the washing operation or disclose a dewatering device (*a rotary drum-type washing device configured to wash the separated paper piece with water so as*

Art Unit: 1791

to eliminate a burnt gypsum component adhering to the paper piece, and a device configured to dewater the water-washed paper piece [paragraph 0008]).

HAMILTON discloses the well known processes related to paper recycling.

HAMILTON discloses that the mechanical process of washing can be used to remove ash and dirt particles from pulp [pg. 189]. HAMILTON discloses the use of a rotary drum type washing device for washing repulped used paper [pg. 196-197 and Figures 82-83]. HAMILTON discloses the use of a re-pulper which is a device that disperses the dry paper in water prior to washing [pg. 159-160 Figure 50 and Figure 60].

At the time of the invention it would have been obvious to wash the used paper of SATORU in the washing device of HAMILTON. A person of ordinary skill in the art would be motivated to using the rotating drum device because it is the most common and most convenient washing device as disclosed by HAMILTON [pg. 196]. Alternatively, SATORU teaches one known type of washing used paper. HAMILTON discloses a second known type of washing used paper of contaminants. A person of ordinary skill in the art would reasonably expect that by substituting the unit of HAMILTON for the unit of SATORU that the paper would be washed. It is *prima facie* obvious to substitute one known component for another known component absent evidence of unexpected results.

HAMILTON discloses that after washing in the rotary drum washer that a couch roll on the rotary drum washer squeezes additional water (dewaters) out of the pulp and increases the exit consistency by 1-2% [pg. 197 column 2].

Art Unit: 1791

As for claim 9, SATORU discloses a rotary kiln prior to separating gypsum from the paper and subsequent to crushing the gypsum board which is a device configured to burn the broken waste gypsum board [paragraph 0004].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. CALANDRA whose telephone number is (571) 270-5124. The examiner can normally be reached on Monday through Thursday, 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony J Calandra/
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791